



COGNITIVE LEVELS OF ENGLISH SUMMATIVE TEST OF GRADE VIII AT SMPN 2 SIMANINDO

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Abstract--This paper was aimed to describe the analysis of the distribution of Cognitive levels of Bloom's Taxonomy in English summative test in odd semester of grade eighth at SMP N 2 Simanindo in 2020/2021 academic year. The research method applied was descriptive qualitative method. The source of the data is the English summative test in odd semester of grade eight designed by the English teacher. There were 49 items of the test consisted of 44 items of multiple choice questions and 5 items of essay. The technique of collecting data in this research was document analysis. The result of this study was the summative test covered by C1 (0%), C2 (22.44%, C3 (67.34 %), C4 (0%), C5 (0%), C6 (10.20 %). only one cognitive skill in HOTS that is C6 (10.20%) and covered two cognitive skills in LOTS that is C2 (22.44%) and the most implemented cognitive domain in English summative test is C3 (67.34%). These results do not fulfill the proportion of questions that supports achievement of basic competencies, namely 30% for C1 and C2, 40% C3 and C4, and 30% for C5 and C6.

Keywords: summative test, learning conformity, cognitive levels

INTRODUCTION

The success of education is determined by the success of the teaching and learning process that is the integration between the activities of the teachers and students by an evaluation where the school or the teacher will give to decide on the position of the students, whether the expectations have been optimally achieved or not. In the teaching-learning process, evaluation has an important role. Evaluation is one of the steps that cannot be separated from the teaching-learning process. Summative test is an example of evaluation. Brown (2004:6) states that a summative test aims to measure or summarize, what a student has grasped, and typically occurs at the end of a course or unit of instruction. A summation of what a student has learned implies looking back and taking stock of how well that student has accomplished objectives but does not necessarily point the way of future progress. Final exams in a course and general proficiency exams are examples of the summative test.

There are three basic principles in constructing a test. One of them is the cognitive level of the test. The cognitive levels are useful for categorizing learning objectives and test according to the level of complexity from recall through near transfer and far transfer. The instruction and test should match the intended learning target that we can see from indicators of competence for both content and cognitive complexity. Indicators of competence can be measured and observed to show the achievement of the basic competencies as the reference of the subjects' assessment.

In arranging a test, the Indonesian government used Bloom Taxonomy where the cognitive taxonomies are organized schemes for classifying instructional learning targets into various levels of complexity. The Indonesian Education Ministry expects that tests in Indonesian should be in higher-order thinking skills by introducing the standard in National Examination. Therefore, the government creates the new curriculum to enhance student's potential named Kurikulum 2013 which is fulfilled with the government's expectation by using high order thinking in education.

Sudjana (2004) states the proportion of a good test for easy, medium and difficult is 3:4:3. The easy levels are in Remember and Understand level, the medium levels are Apply and Analyze level and the difficult levels are Evaluate and Create level. The percentage of questions for each



cognitive level of Revised Bloom's Taxonomy formulated as follow, 30% for C1 and C2, 40% for C3 and C4, 30% for C5 and C6.

Considering the point stated above, the existence of high order thinking (HOT) based on Revised Bloom's Taxonomy is crucial, especially in the test level created by the teacher. Based on the researcher's experience in PPL, there are still English tests which do not fulfill the government regulation. She found that the test level only covers lower-order thinking where the test is not appropriate with the government expectation in high order thinking skills. So, when the students get a high score, it does not show that the student's cognitive level is high.

Based on preliminary data, the test was indicated to lower order thinking skill because the exercise question not help the students to use their thinking critically. To answer most of test, the students just need to remember and understand. Moreover, the higher order thinking skills should guide the students to gives more insight to train their critical thinking. Therefore, the researcher would like to analyze the English summative test whether the English summative test at SMP N 2 Simanindo suitable with the level of Revised Bloom's Taxonomy or not. This study will analyze the English summative test in 2020/2021 of eighth grade at SMP N 2 Simanindo. The result of preliminary data from the interview which is held after the odd final exam in 2019/2020 shows that the school held a summative test at the end of the semester.

LITERATURE REVIEW

Bloom's Taxonomy

In 1956, Dr. Benjamin Bloom, an educational psychologist, in collaboration with Max Englehart, Edward Furst, Walter Hill, and David Krathwohl put forward a theory to upgrade the teaching-learning process from the lower level of rote-learning and memorization to the higher level of analysis, evaluation, creativity, and problem-solving approach. Bloom's Taxonomy comprises three domains of academic learning: cognitive, affective, and psychomotor. The cognitive domain includes mental skills to produce knowledge, the affective domain adds gradual emotional development of attitude/self, whereas, the psychomotor domain encompasses physical skills.

The original Bloom's taxonomy identifies three domains of knowledge: cognitive, affective, and psychomotor. The taxonomy begins at the lowest level and then progresses towards evaluation. The lowest three levels are knowledge, comprehension, and application. The highest three levels are analysis, synthesis, and evaluation.

Revised Bloom's Taxonomy

In 2002, a new updated Bloom's Taxonomy was created to reflect 21st-century skills. The words of the taxonomy were changed from nouns such as knowledge to verbs such as remembering and the order of the two highest levels of thinking were switched.

In *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, Anderson, Krathwohl, and others (2001) presented a paradigm that supports accessing and building of students' prior linguistic and experiential knowledge as a way to enhance new conceptual development. A synthesis of Bloom's Taxonomy, The Cognitive Process Dimension identifies six behavioral areas integral to effectively processing information. These include: 1) Remembering (Recognizing, Recalling, 2) Understanding (Interpreting, Exemplifying, Classifying, Summarizing, Inferring, Comparing, Explaining, 3) Applying (Executing, Implementing) 4) Analyzing (Differentiating, Organizing, Attributing), 5) Evaluating (Checking, Critiquing) and 6) Creating (Generating, Planning, Producing), a concept whereby students synthesize information, by combining "elements together to form a coherent or



functional whole," then reorganize "elements into new patterns or structures," and finally engage in a conceptual problem-solving activity.

Low Order Thinking

Low order thinking of Bloom's Taxonomy embodies the level of skills necessary for advancing through the higher levels of Bloom's Taxonomy. The skills of this level are the building blocks toward to the higher level of thinking. The categories are Remember which is Retrieve knowledge from long-term memory. The cognitive process are recognizing and recalling. The second level is Understand. The Construct meaning from instructional messages, including oral, written, and graphic communication. The cognitive process include interpreting, exemplifying, classifying, summarizing, inferring, comparing and explaining.

High Order Thinking

Higher-order thinking skills are an important aspect of teaching and learning especially at higher education institutions. Thinking skills practices are part of the generic skills that should be infused in all technical subjects. Students with higher-order thinking skills can learn to improve their performance and reduce their weaknesses. Newman and Wehlage state that HOT requires students to manipulate information and ideas that transform their meaning and implications, such as when students combine facts and ideas in order to synthesize, generalize, explain, hypnotize, or arrive at some conclusion or interpretation.

C3, Applying is to carry out or use a procedure through executing or implementing. C4, Analyzing is to break materials or concepts into parts, determine how the parts relate to one another or how they interrelate, or how the parts relate to an overall structure or purpose. C5, Evaluating. In evaluating level, students can make judgments based on criteria and standards through checking and critiquing. C6 is Creating. Creating encourage students to put elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing.

HOTS important role in learning is also shown by research conducted by Rooney which uses inquiry learning model-based learning to improve student's HOTS ability. Furthermore, it is said that in the action research done, the researchers measure the students' HOTS ability based on the assigned by the students. HOTS that aims to make students solve problems is a matter that is needed by students, so that when students graduate from a level of education then students are ready in facing greater challenges. HOTS also stressed that teaching students how to think is a very critical effort to be taken seriously in preparing the students to become a Better future worker and problem solver.

Curriculum

The term curriculum is used to refer to the overall plan or design for a course and how the content for a course is transformed into a blueprint for teaching and learning which enables the desired learning outcomes to be achieved (Richards in Soenoewati, 2013). The curriculum is intended to be directed towards education and the intended purpose of learning activities as a whole.

Curriculum 2013

Curriculum 2013 as a renewal curriculum used to improve religious tolerance as education should also train Indonesian to be mentally tough, physically healthy, tolerant, and



willing to live in harmony with others with different religions, races, and tribes. The renewal includes the improvement of the content, formulation, and the order of KIs/KDs and the simplification of the test, especially the attitude test. This curriculum also applies a credit semester system to enable students to finish their studies as their competence. In addition, it promotes the test as the evaluation strategy to improve the quality of the learning process.

In the regulation of Minister of Education and Culture No 24 the year 2016 about core competence and based on Competence in 2013 Curriculum, the evaluation based on core competence (KI) in every subject which has been standardized in the syllabus. The core competence is described as basic competence from which the indicator is developed. Particularly the core competence is classified as follows: Core Competency 1 for the competencies of spiritual attitude, Core Competency 2 for the competencies of social attitudes, Core Competency 3 for the competencies of knowledge, and Core Competency 4 for the competencies of skills.

Language skill competencies cover the skill competencies to listen, speak, read, and write. Competencies 1 and 2 are applied to all subjects at the same level of education, while competencies 3 and 4 are different for each subject and each level. In language learning, KI 3 only covers grammar and vocabulary, while KI 4 includes skill competencies, such as listening, speaking, reading, and writing.

Test

Brown (2004) states that, in simple terms, a test is a method of measuring a person's ability, knowledge, or performance in a given domain. To qualify as a test, the method must be explicit and structured: multiple-choice questions with prescribed correct answers a writing prompt with a scoring rubric, an oral interview based on a question-script and a checklist of expected responses to be filled in by the administrator. The standard of good test based on Indonesian Education Ministry expects the test should be in high order thinking skills. Sudjana (2004) states the proportion of a good test for easy, medium and difficult is 3:4:3. The easy levels are in Remember and Understand level, the medium levels are Apply and Analyze level and the difficult levels are Evaluate and Create level. The percentage of questions for each cognitive level of Revised Bloom's Taxonomy formulated as follow, 30% for C1 and C2, 40% for C3 and C4, 30% for C5 and C6.

Summative Test

Summative test is a test that usually administered at the end of the course after a set of instructional segments has occurred. The purpose of summative test is grading the student achievement. Information obtained from summative tests is used by teachers to determine grades and to explain reports sent to students and their parents. Brown (2004:6) states that a summative test aims to measure or summarize, what a student has grasped, and typically occurs at the end of a course or unit of instruction. Final exams in a course and general proficiency exams are examples of the summative test.

RESEARCH METHOD

The research design in this study was descriptive qualitative. In this study, the cognitive levels of English summative test has been analyzed. The mostly implemented cognitive domain also has been described. The data of this research were taken from the English summative test and lesson plans in 2020/2021 of grade eight of SMP N 2 Simanindo. The data were analyzed to classify them into the cognitive levels based on Revised Bloom's Taxonomy. In the process of data analysis, the research employed the qualitative analysis and reported the result descriptively.



The data has been selecting the data and then categorizing the data into HOTS or LOTS and followed by calculate the percentage of the mostly implemented cognitive domain in English summative test.

FINDINGS AND DISCUSSION

Cognitive domain involves the process of information as well as the development of thinking skills and abilities. It was consisted of six levels starting from the lowest level that involves the retention of information and the ability to recall knowledge and ends at the highest level of thinking such as critical thinking and the ability to create and evaluate. The lower levels namely remembering, understanding and applying while analyzing, evaluating and creating are categorized as higher order thinking skills.

Bloom's Taxonomy is the most commonly used to analyze the cognitive domain in learning. This Bloom taxonomy were in accordance with the government expectation. The HOTS (higher order thinking skills) of Revised Bloom's Taxonomy were accordance with the newest curriculum, Curriculum 13, which aims to enhance students' cognitive skills and abilities in learning. It was also integrated as part of its testing and evaluation system like summative test. In arranging the test, the test should be construct based on national education standard to reach higher order thinking skills. Therefore, the researcher will analyze the English summative test to find out its cognitive levels.

Table 4.1. The cognitive levels of English Summative Test

| No | Cognitive Skills | Cognitive Levels | Analyzing | Example of Test Items |
|----|------------------|------------------|---|--|
| 1 | Creating | HOTS | <p>This question represent create level. In this level, the students was expect the students to create a new ideas and generalizations based upon previously knowledge two dialogue. It is example of inviting someone.</p> <p>This question require the students to create new idea through instruction example. The students need to put elements together to form a coherent or whole function. Create a dialogue is an example of the highest level of cognitive domain. This question force the students to put idea about obligation into a dialogue.</p> | <p>1. give 2 examples of inviitng someone!</p> <p>2. Give 2 examples of instruction!</p> <p>3. Give 2 example of obligation!</p> |
| 2 | Evaluating | | - | - |
| 3 | Analyzing | | - | - |
| 4 | Applying | | This question requires the student's knowledge in apply | 3. Nani : I think Iwan is the nicest student in our |



the right expression in the blank.

LOTS

This question refers to test the student's ability to use learned material in new situation. This questions also requires the students to produce and call up from the memory about the ideas and information explicitly stated in the dialogue and then complete the dialogue by apply the right expression in the blank.

This question require the students to apply the appropriate expression. This is apply level

5 Understanding

This question required the student's understanding to find the idea or information about the character's interesting in.

This question need the focus of the student to understand the text about. The students have to focus of the whole information and find the true sentence

class. What do you think?

Rona : He is always helpful

- a. I don't think so
- b. I don't agree
- c. Impossible
- d. I think so

6. Bagus : shall we have a picnic to Watu Ulo beach this weekend?

Wiwik : it will be fun

- a. Oh, I disagree
- b. I'm sorry I can't
- c. That would be great
- d. What a tiring journey

26. Angga : it is hot. please?

Diana : Sorry but the fan doesn't work

- a. Will you turn off the fan?
- b. Will you turn on the fan?
- c. Will you break the fan?
- d. Will you open the fan?

3. What is Lolita interested in?

- a. Old stuff
- b. Beaches
- c. Reptiles
- d. Lakes

36. Which sentence is true according to text?

- a. Gigis can sing well because she has beautiful voice
- b. Yuko can sing well although she has a terrible voice



-
- c. Gigis and the writer can do tae kwon do
 - d. Yuko likes dancing very much

6 Remembering - -

In some test that were categorized as LOTS like Understanding level. The student was expected the students to understand some information of reading test. For example

Table 4.2 Example of LOTS (Lower Order Thinking Skills) in English summative Test at SMP N 2 Simanindo

Dear Lolita
Im happy to know that you are going to have your school vacation next month. I think you should come here. I'll take you to some interesting place in Medan. You are interested in historical places aren't you? Ther eare many amazing places here. We'll go to Maimun palace, Shri Mariamman temple, and the great Mosque. And i think you should also visit the crocodile breeding place. You will see crocodile roaming around a large lake. You will like this place, Taman Penangkaran Buaya Asam Kumbang. I attach a photo. So, fly to Medan, Lolita. I'm waiting.
Big hug
Novi.

1. Who will have a school vacation next month?
 - a. Medan students
 - b. Teachers
 - c. Lollita
 - d. Novi

The level of this question is understanding since the focus of the question is information of reading text. Moreover, this question requires the students to concentrate in identifying and locating the information that have been stated in reading text. Therefore, it will be difficult to the students if they do not read and keep in mind the ideas and information stated in reading text. This question require the students to focus find the information about the person who will have a school vacation in the following month.

In another cognitive domain in LOTS that was found in this research is Applying. Most of the test was asking the students to fill a blank in a dialogue.

- | | |
|--|---|
| <p>2. Bagus : shall we have a picnic to Watu Ulo beach this weekend? Wiwik : it will be fun</p> <ol style="list-style-type: none">a. Oh, I disagreeb. I'm sorry I can'tc. That would be greatd. What a tiring journey | <p>3. Nani : I think Iwan is the nicest student in our class. What do you think? Rona : He is always helpful</p> <ol style="list-style-type: none">a. I don't think sob. I don't agreec. Impossibled. I think so |
|--|---|

From the examples of the question above, these questions were categorized as Applying because both of the test required the student's knowledge in apply the right expression in the blank. These questions refer to test the student's ability to use learned



material in new situation. This questions also required the students to produce and call up from the memory about the ideas and information explicitly stated in the dialogue and then complete the dialogue by apply the right expressions in the blank.

Meanwhile in the HOTS domain, the tests were found in the essay test. In the tests, the students were expected to create a simple dialogue. For example, there is a question that asked the students to create a dialogue about obligation. So, the test forced the students to put idea about obligation into a dialogue. At this level, students generate ideas and use them to created a dialogue about obligation.

The findings of the research showed that the distribution of cognitive levels in English summative test of grade at SMP N 2 Simanindo was dominated by LOTS (low order thinking skills). The skills were Understanding level and Applying level. 11 test items which were classified as Understand level and more than a half of the test categorized as the third cognitive levels with total 33 tests. It is the dominant skills which mostly appear in the English summative test of SMP N 2 Simanindo. On the other hand, the HOTS only cover by one level that represent by total 6 test items in Create level. It showed that the cognitive levels of English summative test were in 10,20% in Higher order thinking skills and 89,79 % in Lower order thinking skills. The percentage of each level were 10.20 % with total 6 tests in the highest levels of Revised Bloom's taxonomy, Create level. Then followed by the second level of HOTS with represent by 11 tests with 22.44 % in which were classified as Understand and the third cognitive levels of LOTS as the dominant skills which represent by more than a half of test in 67.34% with total number 33 tests.

Table 4.2 The distribution of the mostly implemented cognitive domain

| <i>COGNITIVE SKILLS</i> | <i>LEVEL S</i> | <i>NUMBERS</i> | <i>PERCENTAGES</i> |
|-------------------------|----------------|----------------|--------------------|
| CREATING | HOTS | 5 | 10.20 % |
| EVALUATING | | - | - |
| ANALYZING | | - | - |
| APPLYING | LOTS | 33 | 67.34 % |
| UNDERSTANDING | | 11 | 22.44 % |
| REMEMBERING | | - | - |

The HOTS (high order thinking skill) were represented on the test items set which only cover one level cognitive skills. It was creating (C6) with total 6 (10.20%) test items. Meanwhile, cognitive skills in the level of Evaluating and Analyzing didn't appear. There are 11 items of the test (22.44%) which were classified as Understanding (C2). On the other hand, there are more than a half of the test items which were categorized as the third cognitive levels (Applying) with total number 33 items (67.34%). It was the dominant skill which mostly appeared in the English summative test items for grade eighth.

The data of this study is English summative test in odd semester which consist of 49 test items. The data were analyzed to classify them into LOTS (Low Order Thinking Skills) and HOTS (High Order Thinking Skills) based on Revised Bloom's taxonomy and calculate the percentage of the



most implemented cognitive domain in the English summative test of the grade eighth at SMP N 2 Simanindo.

The findings show that the questions were represented only cover one level of HOTS that represent by total 6 test items in Create level. On the other hand, there are two levels of LOTS that represented in the test. 11 test items which were classified as Understand level and more than a half of the test categorized as the third cognitive levels with total 33 tests. It is the dominant skills which mostly appear in the English summative test of SMP N 2 Simanindo grade eighth. Thus, after knowing the cognitive levels and the distribution of the most implemented cognitive domain, the teacher needs some revision and improvement to be better English summative test for the next examination.

CONCLUSION

The result of data analysis generated the researcher to draw the conclusion that based on the data analysis, the researcher found that the distribution of cognitive levels in English Summative test of grade eight at SMP N 2 Simanindo was dominated by LOTS (low order thinking skills). The skills were Understanding level and Applying level. 11 test items which were classified as Understand level and more than a half of the test categorized as the third cognitive levels with total 33 tests. It is the dominant skills which mostly appear in the English summative test of SMP N 2 Simanindo. On the other hand, the HOTS only cover by one level that represent by total 6 test items in Create level. It showed that the cognitive levels of English summative test were in 10,20% in Higher order thinking skills and 89,79 % in Lower order thinking skills. The percentage of each level were 10.20 % with total 6 tests in the highest levels of Revised Bloom's taxonomy, Create level. Then followed by the second level of HOTS with represent by 11 tests with 22.44 % in which were classified as Understand and the third cognitive levels of LOTS as the dominant skills which represent by more than a half of test in 67.34% with total number 33 tests.

In conclusion, based on the analysis of English summative test of grade eighth in SMP N 2 Simanindo, it was revealed that low order thinking skills covering the skill of Understand and apply dominated compare to the high order thinking skills. Obviously, in the level of high order thinking skills, there was only one skill, the skill of creating represented on the essay test and evaluate was not found.

Based on the conclusion, it is suggested to the English teacher that in arranged the test, it is suggested that in the near future, an evaluation is needed to evaluate the test items made since the proportion of lower-order thinking skills as well as higher-order thinking skills are not proportional and whether those test items can be sufficient to promote higher-order thinking skills to the students. Therefore, it will be better so it will in accordance with the National Education Ministry standard.

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